

# Exploring Web Scraping with Python

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WHY SCRAPE THE WEB?



**Clarke Bishop**

BIG DATA ENGINEER

@ClarkeBishop [www.clarkebishop.com](http://www.clarkebishop.com)

# Overview

**How web scraping is useful**

**Web scraping examples**

**Scraping for a car**

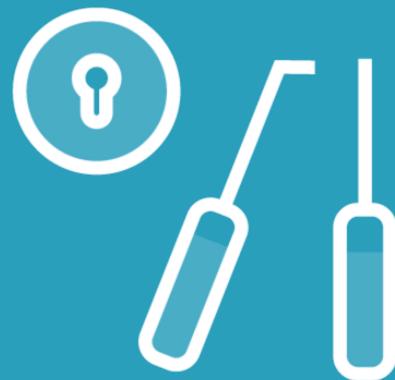
# How Web Scraping Is Useful

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# How Web Scraping Is Useful



**Profit**  
Web scraping  
business model



**Data Access**  
Data is locked  
inside the web



**Potential**  
Imagination + web  
scraping skills



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**hiQ Labs is a data science company, informed  
by public data sources, applied to human  
capital.**

SCHEDULE A DEMO



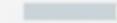
Dashboard for

Marketing (476) ▾

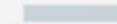
## HIGH RISK EMPLOYEES

**Elizabeth Co...**  
Software Engineer

Discoverable: 87



Marketable: 96



Open: 85



Disengaged: 74



Pull Risk: 100



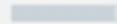
Last Action Taken: None Taken

**Gary King**  
Internet Marketin...

Discoverable: 83



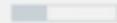
Marketable: 97



Open: 83



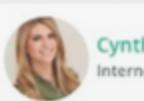
Disengaged: 34



Pull Risk: 100



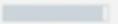
Last Action Taken: 1 day ago

**Cynthia Mora...**  
Internet Marketin...

Discoverable: 100



Marketable: 95



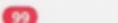
Open: 88



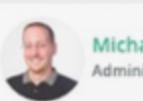
Disengaged: 72



Pull Risk: 99



Last Action Taken: None Taken

**Michael Smith**  
Administrative Ex...

Discoverable: 57



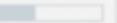
Marketable: 75



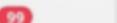
Open: 78



Disengaged: 36



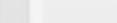
Pull Risk: 99



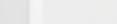
Last Action Taken: None Taken

**Christ**  
Channe...

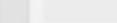
Discoverable: 62



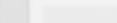
Marketable: 87



Open: 78

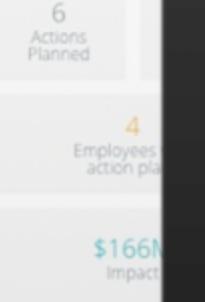


Disengaged: 46

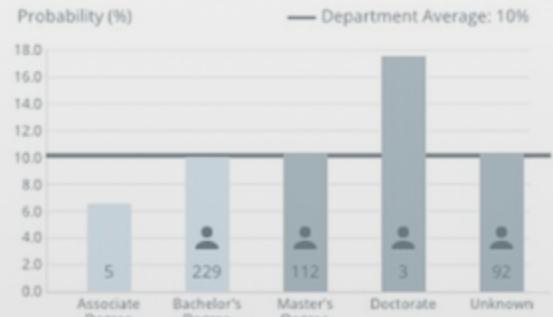


Pull Risk:

Last Action Taken:



## LEAVE PROBABILITY BY EDUCATION



## WHY PEOPLE LEAVE

65%

Of your employees are more **Discoverable** than the company average. These employees have professional information that is easier to find.

72%

Of your employees are more **Marketable** than the company average. These employees are more likely to draw the attention of recruiters.

63%

Of your employees are more **Open** than the company average. These employees are more likely to be open to external opportunities.

45%

Of your employees are more **Disengaged** than the company average. These employees are more likely to be detached from work.

## WHO WE ARE LOSING TO

Small (1-50)

LOST TO GAIN FROM

Medium (51-500)

Large (500 - 1000)

Enterprise (1000+)

**ADD YOUR INTERNAL PUSH RISK INDICATORS** Refine insights and transform your organization



**Clarke Bishop**

CTO ♦ Cloud Solutions Architect ♦ Engineer ♦ Problem Solver

Roswell, Georgia · 500+ connections

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## Clarke Bishop

CTO ♦ Cloud Solutions Architect ♦ Engineer ♦ Problem Solver  
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Mack Robinson College of...](#)



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## About

Fixing the Innovation Dilemma = Operational Leadership to Solve the Adoption of Innovation Problem.

► WHAT'S BROKEN: Innovation is hard. Driving the adoption of innovation—both internal alignment and to the marketplace is harder.

## People also viewed



**Uday kumar P**

UI Developer at Delta Air Lines



**Emily Cade**

Assistant Manager at Buckle



**Gregory Lawson**

Cloud Solutions Architect at Global Payments Inc.



**Emily Emerson**



**Albert (Bert) Sams**

Vice President of Information Technology, Haggai International



**Madhavi Patel**

Project Manager/Business System Analyst at Santander Bank, N.A.



**Ryan Gunnigle**

Kids2 CEO (baby toy & gear), Be Curious Partners Co-Founder (FamTech VC), Hello Einstein Studios Co-Creator (Media)



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## Hiq Labs's Competitors, Revenue, Number of Employees, Funding and Acquisitions

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[Hiq Labs's website »](#)

hiQ designs and develops cloud-based people analytics SaaS platform for employee selection, development and retention.

[Hi... Read more](#)

Estimated Annual  
Revenue

**\$8.8M**

[Agree?](#)[Yes](#)[No](#)

CEO  
**Mark  
Weidick**

CEO Approval Rating  
**80/100**

[Weigh In](#)

Estimated  
Employees

**88**

[Agree?](#)[Yes](#)[No](#)

## OVERVIEW

Founded: 2012

Headquarters: San Francisco,  
California

Status: Private, Independent  
Company of

Industry Sector: Internet Software

SIC Code: 7372 [NAICS listing »](#)

Links:



# Web Scraping Examples

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# Marketing



Competitive &  
Price Analysis

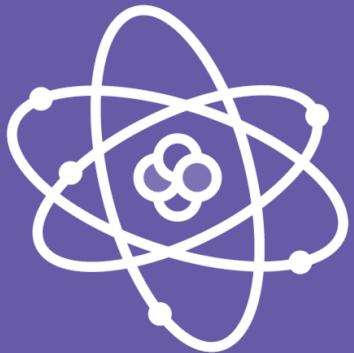


Lead Generation



Keyword Research

# Research



Science



Product  
Research



Finding/Filling  
a Job



Government  
Oversight

# Financial



**Stock Analysis**



**Insurance &  
Risk Management**



**News Gathering  
& Analysis**

Unleash Your  
Imagination

# Scraping for a Car

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A dark, futuristic car, possibly a Tesla Cybertruck, is shown from a front-three-quarter angle against a black background. In the upper left corner, a massive, detailed rendering of Earth is visible, showing continents and clouds. The car's body has a textured, metallic appearance.

Scrape  
Up a Tesla

[Used Cars Search](#) > [Atlanta, GA](#) > [Tesla](#)

# Used Teslas for Sale in Atlanta, GA

[Save Search](#)[Used Cars](#)[New Cars](#)

Location

Atlanta, GA 

Distance

25 miles 

Make

Tesla 

Model

All 

Body Style

All 

Years

Min  to Max 

Price

\$0 - \$100,000+



Mileage

0 - 200,000+



Showing 1 – 30 of 62 Listings

Sort By Best Match 

## Featured Results



2016 Tesla Model S 70D AWD



Mileage: 48,036 miles

Distance: 24 mi. - Lawrenceville, GA

Exterior: Black

Interior: Black

 Good Price  
**\$45,410**

## All Results



2013 Tesla Model S Base RWD



Mileage: 71,085 miles

Distance: 6 mi. - Atlanta, GA

Exterior: Black

Interior: Black

 Exceptional Price  
**\$31,200**

This dealer has 0 similar vehicles available for delivery.

# Tesla Buying Adventure



# Scraping Up a Tesla

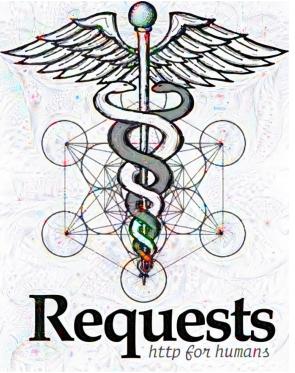
Scrape the car buying websites to find all the Teslas

Evaluate the prices to find truly great deals

Scrape airfares and adjust the deals for airfare expenses

Send an email digest of the top deals each day

# Web Scraping Python Libraries



Beautiful Soup

Requests +  
Beautiful Soup



Scrapy



Selenium

# Summary

**Why scrape the web?**

**The web is filled with profitable data**

**For data trapped in web pages,  
scraping is the only option**

**Scraping can make it easier to buy a  
car**